

# Differences in Self Concept of Single-Sex and Co-Educational Higher Secondary Private School Female Students

Preety Shekhar

Assistant Professor, Department of Psychology  
Gautam Buddha Mahila College, Magadh University, Gaya, Bihar  
E-mail: preety.shekhar@yahoo.in

---

**Abstract**—The paper reviews the impact of educational type on female students' self-concept. Education is the most powerful instrument for changing women's position in the society. It is an essential means of empowering women with the knowledge and skills. It can increase awareness of their rights, boost their self-esteem and provide them the opportunity to assert their rights. Self-concept is the central theme around which a large number of the major aspects of personality are organized. Strengthening one's self-concept may lead to perform well in one's life. Individuals holding negative or low self-concept always show negative personality features, such as poor academic career, fear to take risk or any progressive step, low self-confidence, low self-esteem, resistance to accept others, emotional imbalance and low self-control, un-smart, shy, anxious, frustrated, depressed, suffering with inferiority and guilt feeling, un-social and rigid, etc. Whereas persons holding positive self-concept always shows positive qualities such as high self-confidence, high self-esteem, progressive, flexible, energetic, creative, smart, having good mental health, academically good, etc. A sense of personal worth should be cultivated through good education. Single sex education is to educate males and females in separate school setting, whereas co-education is the integration of both in a one educational environment. Despite the fact that modern education is primarily co-educational, many single sex educational institutions still exist and preferred by the parents in states like Bihar, Rajasthan, U.P., etc. So, in the present scenario of the commercial and competitive world, it has been tried to investigate the self-concept of female students in relation to type of school, their socio-economic status and their parental occupation. Awareness regarding such matter would support parents and policy-makers in understanding that whether girls will be safer and get a better education if they learn only with other girls or in mixed classes with boys.

## 1. INTRODUCTION

Self-concept or self-identity is the mental and conceptual understanding and persistent regard that sentient beings hold for their own existence. In other words, it is sum total of a being's knowledge and understanding of his or her self. It is one's overall conception of one's place or position in relation to all of the elements in one's world, including oneself. Components of the self-concept include physical,

psychological, and social attributes, which can be influenced by the individual's attitudes, habits, beliefs and ideas. These components and attributes can be condensed to the general concepts of self-image and the self-esteem.

Single-sex education, also known as single-gender education, is the practice of conducting education where male and female students attend classes separately or in separate buildings or schools. Single-sex education is practiced in many parts of the world, and in many cultures is advocated on some of the following basis:

**Religion and Culture**- In certain religious and cultural context, girls' parents prefer single-sex schools and may only allow their daughters to attend a girls' schools. Creating single-sex schools for girls may be necessary in order to comply with such religious and cultural traditions. This is one of the reasons for the number of Catholic, Islamic and Hindu schools in Asia that have only girls or boys students.

**Safety**- Parents may be reluctant to send their girls to schools with boys if they have serious concerns about their daughter's safety or reputation in co-educational schools. An example is Cambodian parents' fear of their adolescents daughters being raped or becoming pregnant, reported in a Participatory Poverty Assessment Report of the Asian Development Bank (ADB, 2001).

**Second chance education**- Girls only formal or non-formal education could be a viable policy option for girls who dropped out and are too old to be socially comfortable to re-enter formal classes.

Policy and Program Studies Service (2005) examined that out of seven studies the relationship of single-sex schooling to self-concept, four (57%) reported results in favour of single-sex schooling and three (43%) reported null results. When comparing single-sex and co-educational for girls, three of four (75%) studies reported result supported single-sex schooling and one (25%) study reported null results. When

comparing single-sex education for boys, two of three (67%) studies reported null results, and the other study (33%) reported finding evidence in favour of single-sex schooling.

In another study conducted by Salomone (2006), she stated that “There is some indication that single-sex classes may develop greater self-confidence and broader interests especially among adolescent girls who report that they feel more comfortable, interact more with teachers and develop more favourable attitudes towards these subjects (math and science).” Salomone also states that single-sex schooling promotes boys’ interest in humanities courses such as studying nursing and that it helps them to be more at ease because they do not feel societal pressures to be male.

Smithers & Robinson, (September 2006) studied on the self-concept and the school type, the results shows that from three of the seven studies on self-concept found positive outcomes for girls but four found no significant outcomes.

Patricia Murphy and Elizabeth Whitelegg (June 2006) studied on achievement and self-concept, the results shows that girls in single-sex schools reported a greater sense of belonging and integration in school than did their peers in mixed schools. Thus a conclusion, single-sex organization can have a positive effect on girls’ self-concept and feeling of belonging and this correlates with overall performance.

Dr. Andrew J. Martin (December 2002) results supported the greater achievement by girls and boys of single-sex school.

Carolyn Jackson (2002) concluded in the article that girls’ only classes have positive effects for girls learning experiences.

Pamela Haag (September 2000) studied of the effect of school type on girls’ self-esteem suggest that the sources of self-esteem for girls may differ in single-sex and co-educational schools. Studies have found higher self-esteem for girls in the single-sex as compared with the mixed-sex environment.

Mieke Van Houtte (December 2004) studied on Gender context and achievement. There has been a relatively great deal of research into the effect of a school’s gender context on school achievement in secondary education. To conclude, we can state that with respect to their academic achievement, boys are better off in a mixed-gender setting with a high proportion of girls. This has no impact on their shared feelings about studying, that is their study culture, but it does influence their individual performance. As for girls, academically speaking, a single-sex school is preferable to a coeducational school. As such, creating a situation that benefits both girls and boys seems difficult, but a majority of girls in co-educational settings might be to the advantage of boys and girls alike.

The National foundation for Educational Research, England (July 2002) was commissioned to study the effect of school size and school type ( single-sex vs. co-ed) on academic performance. They found, 1. Even after controlling for students’ academic ability and other background factors, boys

and girls did significantly better in single-sex schools than in co-ed schools. 2. Girls at single-sex schools were more likely to take non-traditional courses which run against gender stereotypes such as advanced math and physics.

Alison Gordon (June 11, 2000) studied on the effect of single-sex schools on boys and girls. The conclusion from the study is that both boys and girls are academically disadvantaged in co-educational schools, but that the disadvantage is greater for boys.

Cornelius Riordan (1990) professor of sociology at Providence University in Rhode, Island, found that girls in single-sex schools consistently outperformed girls in co-ed schools.

Australian Council for Educational Research (2000) compared performance of students at single-sex and co-educational schools. Their analysis, based on six years of study of over 2,70,000 students, in 53 academic subjects, demonstrated that the both boys and girls who were educated at single-sex classrooms scored on average 15 to 22 percentile rank higher than did boys and girls in co-educational settings. The report also documented that “boys and girls in single-sex schools were more likely to be better behaved and to find learning more enjoyable and the curriculum more relevant.

Marlene Hamilton(1985) found that students attending single-sex schools outperformed students in co-ed schools in almost every subject tested. Result- girls at single-sex schools attain the highest achievement; boys at single-sex schools are next; boys at co-ed schools are next; and girls at co-ed schools do worst of all.

Mael et al. (2005), “There is some support for the premise that single-sex schooling can be helpful, especially for certain outcomes related to academic achievement and positive academic aspirations. For many outcomes, there is no evidence of either benefit or harm. There is limited support for the view that single-sex schooling may be harmful or that coeducational schooling is more beneficial for students.” Of the forty-three studies related to concurrent academic accomplishment, 35% find for single-sex schools where as the remaining 65% find no difference or a mixture of differences.

Some studies found evidence in favour of single- sex education and some shows neither benefit or harm.Eventually, it does make sense that separating boys and girls would have some positive effect and create an environment of non-stereotyping and foster the learning cycle.

**Purpose:** The purpose of the present study was to conduct a comparative study of self-concept of single-sex and co-educational higher secondary female students. The following hypotheses were formulated for the verification-

1. It id hypothesized that the self-concept of single-sex private school female students will be higher than that of co-educational private school female students.

2. It is hypothesized that those who are high on self-concept will differ from those who are low on self-concept in respect of their socio-economic status.
3. It is hypothesized that those who are high and the low on self-concept differ significantly from one another with respect of their parental occupation.

## 2. METHODOLOGY

**Sample-** The sample comprised of eighty higher secondary female students of age group 15-17 years, out of which forty were from single-sex private school and forty were from co-educational private school. Incidental sampling technique was used.

**Tools and Tests-**The following tools and tests were used.

**Personal data sheet:** It consisted of fundamental information about the subject such as name, age, sex, educational qualifications, socio-economic status, father's occupation etc.

**Mohsin Self Concept Inventory:** It consists of 42 yes/no type items in which some are positively phrased and others are negatively phrased. For measuring self-concept, a subject was required to judge whether the statements were applicable to him/her. One score was given to each statement marked yes/no according to its meaning.

**Validity:** According to Mohsin, "The MSCSI was hypothesized to correlate negatively with a short version of Maslow's SI test adopted by the author, and positively with MPCRI, the Mohsin's Parent Child Relation Inventory, an adaptation of the Parental Behaviour Questionnaire developed by Ojha(1973). The correlation with Maslow SI test was -0.351 and with MPCRI, it was 0.396 for a sample of 150 under graduate students (Mohsin 1976). Both the values are significant at less than one present level of confidence. The obtained correlation may be taken as indices of construct validity of the MSCSI".

**Reliability:** Stated two-halves reliability of the MSCSI was found to be 0.57 for half, and 0.73 for the full inventory as in the Spearman-Brown formula.

## 3. PROCEDURE OF THE DATA COLLECTION

First of all an official permission was obtained from the various schools. Before the test was administered, the investigator explained to the students the nature and purpose of the test, as well as confidentiality was ensured to the participants. A rapport was established then the subjects were given MSCSI with the personal data sheet. There was no time limit for the test. The test was administered to a group of 20-25 students at one time and the eighty students were tested in course of a week.

## 4. RESULTS

Before the verification of various hypotheses, the data was subjected to normalcy test. Table 1 presents the summary of the computation of the central tendency and variability scores of self-concept of the single-sex and co-educational school female students.

**Table 1: Measurement of Central tendencies and variability of scores on Self-Concept scale of sub sample of single-sex and co-educational female students**

Group	Female students of single-sex	Female students of co-ed.
Mean	31	27.75
Median	31.75	27.7
Mode	33.25	27.6
Standard Deviation (SD)	4.9	5.55
Standard Error(SE)	0.77	0.88

An inspection of table 1 shows that the value of Mean(M=31.0), Median(31.75) & Mode(Mo=33.25) of the female students of the single-sex school with respect to self-concept scale is not the same. Thus suggesting that the distribution of scores of samples is statistically not normal. Standard deviation (SD) is 4.9, which is quiet less, so it mean that the scores are clustered around the mean and the Standard error (SE) is 0.77 that means the scores of sample are reliable.

Similarly the value of Mean(M=27.75), Median(27.7) & Mode(Mo=27.6) of the female students of the co-educational school with respect to self-concept scale is almost the same. Thus suggesting that the distribution of scores of samples is statistically normal. Standard deviation (SD) is 5.55, which is quiet less, so it mean that the scores are clustered around the mean and the Standard error (SE) is 0.88 that means the scores of sample are reliable.

In order to verify the hypothesis that "The Self-Concept of Single-Sex Private School Female Students will be higher than that of Co-Educational Private School Female Students", a chi-square test was applied on single-sex and co-educational school female students in respect to those who are high and low on self-concept. Table 2 presents the summary of the chi square computed.

**Table 2: Strength of association between the Highs and the Lows on Self-Concept on the one hand and the Female students of Single-sex and Co-educational schools on the other**

	High Self-concept	Low Self-concept
Single-sex school students	18	22
Co-ed school students	21	19
$\chi^2$ (df=1)	4.46	
P - value	Significant at .05 level of confidence	

An inspection of table 2 shows that the chi-square between the highs and lows on self-concept with respect to single-sex and co-educational school female students is 4.46 ( $\chi^2=4.46$ ,  $df=1$ ), which is significant at .05 level of confidence. This suggests that the result is marginally significant. It does not strongly supports the hypothesis.

Before verifying the second hypothesis, the percentage of students of different socio-economic group was calculated. Table 3 presents the summary of the computation.

**Table 3: Percentage of students of different Socio-economic status group of High and Low on Self- Concept**

Socio-economic status	Upper class	Middle class	Lower class
High self-concept	35.0%	10.0%	3.75%
Low self-concept	13.75%	31.25%	6.25%

An inspection of table 3 shows that the percentage of students belonging to three classes, i.e. upper, middle and lower, divided on the basis of socio-economic status of the students of the high self-concept and low self-concept. The percentage of students of high self-concept of upper, middle and lower class is 35.0%, 10.0% & 3.75% respectively. Similarly, the percentage of students of low self-concept of upper, middle and lower class is 13.75%, 31.25% & 6.25% respectively.

To verify the above stated hypothesis, a chi-square test was computed. Table 4 presents the summary of the computation.

**Table 4: Strength of association between the Highs and the Lows on Self-Concept on the one hand and the Female students of Upper class, Middle Class and Lower class of Socio-economic status on the other (n=80)**

	High self-concept	Low self-concept
Upper class	28	11
Middle class	8	25
Lower class	3	5
$\chi^2$ ( $df=2$ )	14.467	
P - value	Significant at .001 level of confidence	

(Note: Yates' correction of .5 was applied.)

An inspection of table 4 shows that the chi-square between the high and low on self-concept with respect to socio-economic status is 14.467 ( $\chi^2=14.467$ ,  $df=2$ ), which is significant at .001 level of confidence. This suggests that the result is significant and supports the hypothesis.

Before verifying the next hypothesis, the percentage of students on the basis of their parents' occupation was calculated. Table 5 presents the summary of the computation.

**Table 5: Percentage of students on the basis of their Parental Occupation of High and Low on Self- Concept**

Parental Occupation	Private	Business	Govt.
High self-concept	5.0%	35.75%	10.0%
Low self-concept	7.5%	15.0%	28.75%

An inspection of table 5 shows the percentage of students on the basis of their parental occupation in three sectors, i.e. private, business & governmental sector, of high and low self-concept. The percentage of students of high self-concept having their father's occupation private, business & governmental is 5.0%, 35.75% & 10.0% respectively. Similarly, the percentage of students of low self-concept having their father's occupation private, business & governmental is 7.5%, 15.0% & 28.75% respectively.

To verify the above stated hypothesis, a chi-square test was computed. Table 6 presents the summary of the computation.

**Table 6: Strength of association between the Highs and the Lows on Self-Concept on the one hand and the Female students having their Parent's Occupation, Private, Business & Governmental sector on the other (n=80)**

	High self-concept	Low self-concept
Private	4	6
Business	27	12
Governmental	8	23
$\chi^2$ ( $df=2$ )	11.475	
P - value	Significant at .001 level of confidence	

(Note: Yates' correction of .5 was applied.)

An inspection of table 6 shows that the chi-square between the high and low on self-concept with respect to their parental occupation is 11.475 ( $\chi^2=11.475$ ,  $df=2$ ), which is significant at .001 level of confidence. This suggests that the result is significant and supports the hypothesis.

## 5. DISCUSSION AND CONCLUSION

The findings in terms of three hypotheses may be summarized as following:

1. The chi-square was computed to test the hypothesis that the self-concept of single sex private school female students would be higher than that of co-educational private school female students. The chi-square ( $\chi^2=4.46$ ,  $df=1$ ) was significant at .05 level of confidence, which suggested that the school type (single-sex or co-ed) had some effect on the self-concept of female students but not completely. Therefore, it can be said that the study should be repeated.
2. The chi-square was computed to test the hypothesis that those who are high on self-concept will differ from those who are low on self-concept in respect of their socio-

economic status. The chi-square ( $\chi^2=14.467$ ,  $df=2$ ) was significant at .001 level of confidence, which suggested that the socio-economic status had effect on the self-concept of female students. Thus, the result supported the hypothesis.

3. The chi-square was computed to test the hypothesis that those who are high and the low on self-concept differ significantly with one another with respect to their parental occupation. The chi-square ( $\chi^2=11.475$ ,  $df=2$ ) was significant at .001 level of confidence, which suggested that the parental occupation had effect on the self-concept of female students. Thus, the result supported the hypothesis.

Finally, it can be said that, as the study was conducted on a small sample, so the result may not be conclusive. If the study would be conducted on a large sample, more meaningful results could be obtained.

## 6. ACKNOWLEDGEMENT

My sincere thanks are due to the principals of various private schools, for providing me facilities in the collection of the data, and to all those students who helped me to accomplish this work. I wish to express my thanks to my family members, who were always there to help me in one way or the other.

## REFERENCES

1. Alison Gordon, (June 11, 2000), "In A Class of Their Own: boys benefit even more than girls from single-sex schools. A Level Grade Study Reveals", in the mail on Sunday (UK), page-42.
2. A large Australian Study (2000): The Australian Council for Educational Research (ACER) compared performance of students at single-sex and co-educational school. Website-[www.archive.org](http://www.archive.org)
3. Article by Wesley Sharpe, Ed.D. Educational World Copyright 2000 Education World.
4. Carolyn Jackson, (2002), "Can Single-sex classes in Co-educational schools enhance the Learning Experiences of Girls and/or Boys?", An Exploration of Pupils Perceptions.
5. Clark, Ian (Aug 11, 2004), Lancaster University (UK), "Co-education and Gender, The End of the Experiment?". Education Policy Analysis Archives Volume 12, no. 41.
6. "Coeducation" Encyclopedia Britannica (2007). Encyclopedia Britannica Online. Retrieved March 8, 2007.
7. Collins C. Kenvey J. and Mc. Leod J. (2000) "Factors influencing the educational performance of males and females in schools and their initial destination after leaving school" Common Wealth Dept. of Education, Training and Youth Affairs, Canberra, ACT.
8. Cornelius Riordan, (1990) "Girls and Boys in School: Together or Separate?" New York, Teacher College Press, 1990.
9. Dr. Andrew J. Martin, (Dec 2002), "Improving the Educational Outcomes of boys", Final Report to ACT, Dept. of Education, Youth and Family Services, AJ Marin Research.
10. Encyclopedia of Psychology, Apr 06, 2001, Self-concept.
11. Gale Encyclopedia of Psychology, 2<sup>nd</sup> ed. Gale Group, 2001.
12. Gerald W. Bracey (Aug 11, 2004), Independent Research, "Separate but Superior?", A review of Issues and Data, Being on Single-sex education, Education Policy Research Unit (EPRU), College of Education.
13. Haag, Pamela "K-12 Single sex education: What does the Research say?", ERIC Digest, Publication 2000-2009, Author-Haag, Pamela, EDO-PS-00-9 September 2000, Source-ERIC clearing house on Elementary and Early Childhood Education Champaign IL. [www.eric.ed.gov](http://www.eric.ed.gov)
14. Haag, Pamela and The AAUW Educational Foundation. (2000). *Voices of a Generation: Teenage Girls Report about Their Lives Today*. New York: Marlowe.
15. Hamilton, Marlene (1985), "Performance levels in Science and other subjects for Jamaican Adolescents attending Single-sex and Co-educational High schools", International Science Education 69(4): page-535-547, 1985
16. Mael et al. "Single-sex versus Co-educational Schooling: A systematic review, Doc#2005-01, US. Dept. of Education, 148 pp. Mael et al. (2005) Literature review of 150 studies.
17. Margaret Schneider, Genevieve Fridlund, Dunton and Dan M. Cooper, (January 2008), An intervention study in "Physical activity and Physical Self-concept among Sedentary adolescent female", Psychology of sports and Exercise, Volume 9, Issue 1.
18. Mieke Van Houtte, (December 2004), "Gender context of the school and Study culture, Or How the Presence of Girls Affects the Achievements of Boys". Educational studies, Vol. 30, no.4, Ghent University, Ghent, Belgium.
19. Murphy, Patricia and Whitelegg, Elizabeth (June 2006), Institute of Physics Report, "Girls in the Physics Classroom", A review of the research on the participation of girls in Physics, The Open University.
20. Norflex James and Herbert Richards (2003), "Escaping Stereotypes: Educational attitudes of male alumni of single-sex and co-ed school", Psychology of Man and Masculinity, 4: 136-148, 2003.
21. Policy and Program Studies Service, (2005), "Single-sex versus Co-educational Schooling, A systematic review.
22. Pajares, Frank and Dale H. Schunk, Chapter in R. Riding & S. Rayner (Eds.), (2001), "Self-beliefs and School Success": Self efficacy, Self-concept and school achievement, Perception (pp.239-266), London Ablex Publishing.
23. Smithers & Robinsons, Smithers, A. & Robinsons, P. (Sept. 2006), "The Paradox of Single-Sex and Co-educational Schooling", Carmichael Press, University of Buckingham, Buckingham, England.

24. Salomone, Rosemary C. Same, (2006). Different, Equal: Rethinking Single-Sex Schooling. New Haven: Yale University Press.
25. Single-Sex vs. Coed: The Evidence" National Association for Single Sex Public Education. 2006. Retrieved February 13, 2007 .
26. The National Foundation of Educational Research, England, (July 2002), "The effect of School size and school type (Single-sex vs. Co-ed.) on Academic performance, England, 2002. [www.single-sex vs. co-ed: The Evidence.com](http://www.single-sex-vs.co-ed:TheEvidence.com).